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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,868	04/02/2004	Tomoo Yamakage	249363US2SRDCONT	1001

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EXAMINER

JOHNS, ANDREW W

ART UNIT PAPER NUMBER

2621

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/815,868

**Applicant(s)**

YAMAKAGE ET AL.

**Examiner**

Andrew W. Johns

**Art Unit**

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/327,072.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/2/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: E1-E5 and D1-  
5 D3 (variously mentioned on pages 3-5 of the specification). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 U.S.C. § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form  
10 the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant  
15 for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

20 3. Claims 1 and 21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Petrovic '012 (US 6,427,012 B1).

Petrovic '012 teaches a digital watermark embedding method of embedding watermark information in an image signal (column 3, line 63; column 4, lines 51-52; image or video signals), that extracts a specific frequency component signal from the input image signal (column  
25 6, lines 12-26), controls at least one of a phase and amplitude of the specific frequency component signal in accordance with the watermark information (column 6, lines 32-37; the frequency component signal (i.e., the replica  $r_i(t)$ ) is amplitude modulated according to the watermark information (i.e., the auxiliary signal  $m_i(t)$ ); see equation 2 in column 5); outputs an

image signal embedded with the watermark information (i.e., the “stego signal” at column 6, line 39) by superposing the specific frequency component signal, at least one of the phase and amplitude of which has been controlled, on the input image signal (column 6, lines 37-39; the amplitude modulated replica is added to the original cover signal to generate the stego signal); and limits an amplitude of the specific frequency signal (using gain factor  $g_i$  as described at column 5, lines 12-18), as variously required by claims 1 and 21.

***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Petrovic ‘012 as applied to claims 1 and 21 above, and further in view of Nakamura et al. ‘312 (US 6,185,312 B1).

While Petrovic ‘012 meets a number of the limitations of the claimed invention, as pointed out more fully above, Petrovic ‘012 fails to specifically teach that the specific frequency component signal be selected randomly, as further stipulated by claims 3 and 22.

Nakamura et al. ‘312 teaches a method and apparatus for embedding and reading watermarks, in which the image data is separated into frequency components (using an orthogonal transform; S12 in Figure 2), selecting specific frequency components using a random sequence (S13 in Figure 2), and embedding the watermark information in the randomly selected frequency components (S14 in Figure 2). Because the random selection of Nakamura et al. ‘312

provides for the ability to embed a plurality of different watermarks independent of each other (column 51, line 65 through column 52, line 2), it would have been obvious to one of ordinary skill in the art to use such random selection in the Petrovic '012 system so as to allow for embedding of a plurality of independent information sets.

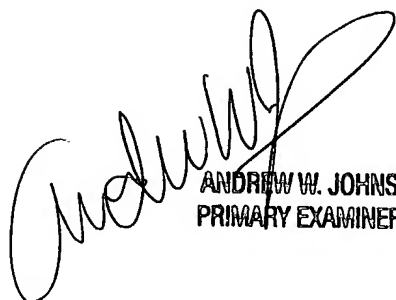
**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner is normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

A. Johns  
26 August 2004



ANDREW W. JOHNS  
PRIMARY EXAMINER